

20 scholarships Grant opens engineering world to undergraduates

Tina Hilding, College of Engineering and Architecture



Researchers in the College of Engineering and Architecture received a National Science Foundation grant that will they hope will allow more undergraduates than ever to gain research experience at Washington State University – especially freshmen and sophomores.

The two-year grant provides for the development and implementation of an intensive short course, seminar and mentoring to introduce 20 lower division undergraduates to research in engineering. Students will receive up to \$1,500 in research support and stipends for participating in the pilot program to jump start their research and design careers in engineering.

Getting students into the research lab is becoming an essential component in undergraduate education in engineering because of the valuable experience it provides in real-world research and design problems, said **Dave Bahr**, associate professor in the School of Mechanical and Materials Engineering and undergraduate research director in the WSU Office of Undergraduate Education.

The experience is significantly different from one in a classroom in that it requires creative problem-solving where there is no right answer, Bahr said. Such experience is important in the contemporary engineering workplace as well as a key to getting undergraduates excited about pursuing graduate study, he said.

Bahr has directed a Research Experience for Undergraduate program in materials science and engineering for nine years. Over 80 percent of students went on to graduate school, and 49 percent of those were women or minority students. The REU is partially funded by the National Science Foundation. The program brings students from other universities to work with WSU professors for a summer. Many WSU students also go to other colleges on REU programs, and bring their experiences back to the classrooms in Pullman.

The new Cougar Undergraduate Research Experience (CURE) grant will provide a summer short course in which students will learn essential fundamentals of research: how to use the libraries, how to keep notebooks, what working in a lab is like, and how to find an advisor. Participating students will be prepared to become student research assistants, participating fully in the design and discovery process with faculty, Bahr said. Unlike the REU programs, this CURE program targets only current WSU students.

“It’s basically a certification program,” Bahr said. “When they finish the summer, these students will have something on their resume that says that they’re a little more savvy about doing research on campus. That lets faculty know they are going to hit the ground running. They will be better prepared to participate fully in the world-class research environment.”

During the school year, a mentoring and symposia series will be run for the students who went through the short course, with follow up advising and partnering of faculty and students to projects.

It is a goal of the Office of Undergraduate Research at WSU to foster an environment at WSU where every student who wants hands-on experience can have the opportunity, Bahr said. This engineering program is another of the positive steps toward that goal, he said.

Other faculty members participating in the program from a variety of engineering disciplines include **Brian Lamb, David Field, Sirisha Medidi, Kip Findley, and Michael Wolcott.**